WHAT IS CLAIMED IS:

1. A hologram retention method comprising the steps of:

reproducing information recorded as a hologram in a predetermined position of an optical recording medium; and

subsequently re-recording and retaining the reproduced information in the same position as the predetermined position as a hologram.

2. A hologram retention method according to claim 1, wherein when an intensity of a reconstructed beam has fallen to a predetermined value or less, the reproduced information is re-recorded and retained.

3. A hologram retention method according to claim 1, wherein when the number of times of reproduction has exceeded a predetermined value, the reproduced information is re-recorded and retained.

4. A hologram retention method according to claim 1, wherein when re-recording the reproduced information, position information representing a position in which information has been recorded is also recorded.

5. A hologram retention method according to claim 1, wherein when re-recording the reproduced information in the same position as the predetermined position as a hologram, the reproduced information is re-recorded and retained so as to cause an intensity of a reconstructed beam to have a value that can be detected.

6. A hologram retention method according to claim 1, wherein when re-recording the reproduced information in the same position as the predetermined position as a hologram, the reproduced information is re-recorded and retained so as to cause a polarization state of a reconstructed beam obtained from the re-recorded hologram to be different from a polarization state of a reconstructed beam obtained from the hologram

preceding the re-recording.

7. A hologram retention method according to claim 1, wherein the optical recording medium comprises a photorefractive material, a photochromic material or a polarization sensitive material.

8. A hologram retention method according to claim 1, wherein the optical recording medium comprises polyester having an azobenzene frame in its side chain.

9. A hologram retention method comprising the steps of:

reproducing information recorded as a hologram in a predetermined position of an optical recording medium; and

subsequently re-recording and retaining the reproduced information in a position different from the predetermined position as a hologram.

10. A hologram retention method according to claim 9, wherein when an intensity of a reconstructed beam has fallen to a predetermined value or less, the reproduced information is re-recorded and retained.

11. A hologram retention method according to claim 9, wherein when the number of times of reproduction has exceeded a predetermined value, the reproduced information is re-recorded and retained.

12. A hologram retention method according to claim 9, wherein when re-recording the reproduced information, position information representing a position in which information has been recorded is also recorded.

13. A hologram retention method according to claim 9, wherein the optical recording medium comprises a photorefractive material, a photochromic material or a polarization sensitive material.

14. A hologram retention method according to claim 9, wherein the optical recording medium comprises polyester having an azobenzene frame in its side chain.

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15. A hologram retention method comprising the steps of:

dividing information of a file unit in a signal beam into a plurality of blocks, and multiplexing the information in an optical recording medium as holograms of a plurality of pages every block;

reproducing the information of the file unit; and

subsequently re-recording and retaining the reproduced file so as to re-divide the reproduced file into a smaller number of blocks.

16. A hologram retention method according to claim 15, comprising the steps of:

applying a signal beam and a reference beam simultaneously to the optical recording medium while changing an angle formed by the signal beam and the reference beam, and thereby changing a recording angle; and

dividing information of a file unit in the signal beam into a plurality of blocks, and multiplexing the information in the optical recording medium as holograms of a plurality of pages every block.

17. A hologram retention method according to claim 15, comprising the steps of:

making an angle formed by the signal beam and the reference beam constant, applying a signal beam and a reference beam simultaneously to the optical recording medium while relatively moving at least one of the signal beam and the reference beam, and the optical recording medium, and thereby changing a recording position; and

dividing information of a file unit in the signal beam into a plurality of blocks, and multiplexing the information in the optical recording medium as holograms of a plurality of pages every block.

18. A hologram retention method according to claim 15, comprising the steps

of:

making an angle formed by the signal beam and the reference beam constant,
applying a signal beam and a reference beam simultaneously to the optical recording
medium while changing a wavelength of the reference beam and the signal beam; and

dividing information of a file unit in the signal beam into a plurality of blocks,
and multiplexing the information in the optical recording medium as holograms of a
plurality of pages every block.

19. A hologram retention method according to claim 15, comprising the steps
of:

making an angle formed by the signal beam and the reference beam constant,
applying a signal beam and a reference beam simultaneously to the optical recording
medium while changing a phase of the reference beam; and

dividing information of a file unit in the signal beam into a plurality of blocks,
and multiplexing the information in the optical recording medium as holograms of a
plurality of pages every block.

20. A hologram retention method according to claim 15, wherein when re-
recording a reproduced file, position information representing a position in which the
file has been re-recorded is also recorded.